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POLYTYPOY OF *SYNCHIROPUS AGASSIZI* (GOODE & BEAN, 1888), WITH THE DESCRIPTION OF A NEW SUBSPECIES FROM THE WESTERN ATLANTIC

(TELEOSTEI: CALLIONYMIDAE)

INTRODUCTION

During a revisionary study on Atlantic dragonets of the family Callionymidae, I found that populations of *Synchiropus agassizi* from the West and South Atlantic were morphologically distinguishable necessitating the distinction of three subspecies.

The genus *Synchiropus* was recently revised by FRICKE (1981), describing *S. agassizi* to be distributed in the West Atlantic from South Carolina (about 33° N) to Uruguay (about 35° S). In the same year, TRUNOV (1981) described a population from Valdivia Bank in the southeastern Atlantic (26°13' S 06°19' E) under the name *Callionymus valdiviae*. It is regarded as a subspecies of *Synchiropus agassizi* in the present paper.

The subspecies *Synchiropus agassizi agassizi* is restricted to a distribution area west of about 80° W in the Gulf of Mexico and the western Caribbean Sea. The eastern populations belong to a different subspecies, which is described as new in the present paper.

Methods follow those used by FRICKE (1983: 6-11).

Specimens from the following collections have been examined:

- AMNH The American Museum of Natural History, New York;
- ISH Institut für Seefischerei, Hamburg;
- NSMT National Science Museum, Tokyo;
- USNM National Museum of Natural History, Washington D.C.;
- ZIL Academy of Sciences of the U.S.S.R., Zoological Institute, Leningrad.

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KEY TO THE SUBSPECIES OF *SYNCHIROPUS AGASSIZI*

- 1a. Male: First and second D₁ spines much longer than third spine, anal fin pale; female: first D₁ spine filamentous; West Atlantic east of 80° W *Synchiropus agassizi dagmarae* n. subsp.
- 1b. Male: First D₁ spine a little longer, but second D₁ spine nearly not longer than third D₁ spine, anal fin with a distal dusky streak; female: first D₁ spine not filamentous; Caribbean Sea and Gulf of Mexico west of 80° W, or southeastern Atlantic 2
- 2a. Preopercular spine formula — $\frac{1}{\text{—}}$ 1; male: C with long filaments, seventh D₂ ray not filamentous, not elongate; West Atlantic *Synchiropus agassizi agassizi* (Goode & Bean, 1888)
- 2b. Preopercular spine formula — $\frac{2}{\text{—}}$ 1; male: C without filaments, seventh D₂ ray elongate and filamentous; southeastern Atlantic *Synchiropus agassizi valdiviae* (Trunov, 1981)

Synchiropus (Synchiropus) agassizi agassizi (Goode & Bean, 1888
(Fig. 1). Western Atlantic Dragonet

- Callionymus agassizii* Goode & Bean, 1888: 29, fig. 207 (Gulf of Mexico, 340 fms (622 m)).
Eigenmann & Eigenmann, 1888: 78 (after Goode & Bean).
Jordan & Evermann, 1900: 3207 (after Goode & Bean).
Jordan, Evermann & Clark, 1930: 450 (after Goode & Bean).
- Callionymus himantophorus* Goode & Bean, 1895: 296-297, figs. 268, 268A, 268B (various localities, off Barbados (erroneous locality) and Gulf of Mexico).
Jordan & Evermann, 1898: 2186-2187 (after Goode & Bean, 1895).
Eschmeyer, 1965: 236 (tab. 1) (correct station data for *C. himantophorus*: « Blake » St. 274).
- Callionymus agassizi*: Davis, 1966 (part): 854-859, figs. 9-10 (Honduras, Yucatan, Gulf of Mexico).
- Synchiropus agassizi*: Fricke, 1981 (part): 46-50 (Gulf of Mexico).
Fricke, 1982 (part): 75.
- Foetorepus agassizi*: Nakabo, 1982: 79 (listed).

M a t e r i a l (see also FRICKE, 1981: 46, Gulf of Mexico material; totally: 16 specimens):

Honduras: USNM 188529, 3 males (101.6-110.5 mm SL) and 5 females (93.7-97.7 mm SL), 16°44' N 87°55' W, 190 fms (348 m), R/V « Oregon » St. 3634, 9 June 1962.

Description: D₁ IV; D₂ (7-)8; A vi,1; P₁ i, 16-20, ii(-iii) (totally 19-23); P₂ I,5; C (ii), i, 7, ii, (i), in one specimen (ii), i, 2, i, 4, ii, (i).

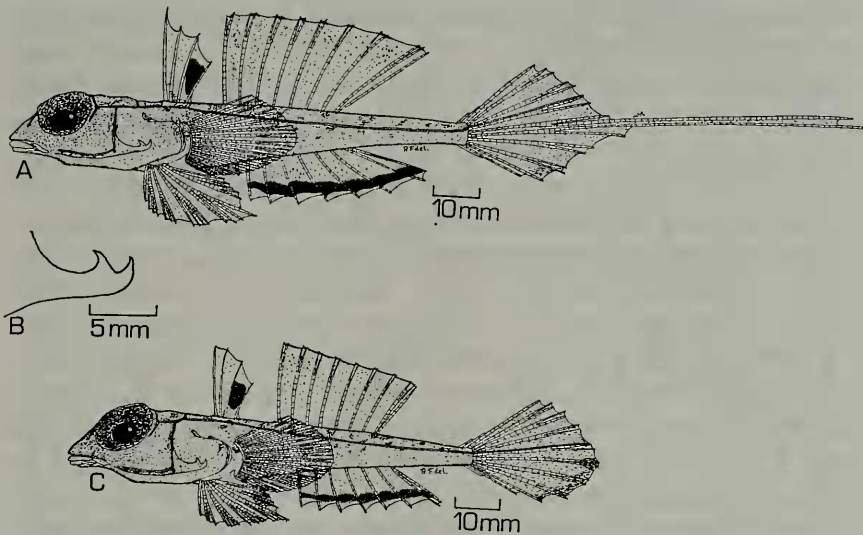


Figure 1 - *Synchiropus agassizi agassizi* (Goode & Bean, 1888), USNM 188529, Honduras, specimen 2, male, 105.0 mm SL: A. Lateral view. B. Left preopercular spine. Specimen 4, female, 97.2 mm SL: C. Lateral view.

Body elongate and slightly depressed. Head slightly depressed, 3.2-3.6 in SL. Body depth 6.2-7.4 in SL. Body width 5.3-6.1 in SL. Eye diameter 2.0-2.6 in head. Preorbital length in the male 3.1-3.5 in head, in the female 3.5-4.1 in head. Interorbital distance 19.5-42.9 in head. Occipital region with two low bony protuberances. Branchial opening sublateral in position. Preopercular spine with an upcurved main tip and one upcurved point on its dorsal margin (probably rarely two or three), base and ventral margin smooth (formula: $-\frac{1}{-}1$; see Fig. 1 B). Urogenital papilla elongate in the male, 11.0-21.0 in head; very small or not visible in the female. Lateral line reaching from eye to preorbital region and to the end of the third or fourth branched caudal fin ray (counted from above), with a suborbital and a long preoperculo-mandibular branch; the lines of the opposite sides are interconnected

by a commissure across the occipital region. Caudal peduncle length 4.0-4.6 in SL. Caudal peduncle depth 24.0-31.0 in SL.

First spine of first dorsal fin in the male longest, in very large specimens filamentous. Membrane behind fourth spine of first dorsal fin very small or absent. First spine in the female as long as second spine, not filamentous. Predorsal (1) length 2.71-3.02 in SL. Second dorsal fin in the male distally straight or slightly convex, in the female distally straight. Rays branched, the last divided at its base. First ray in the male 4.0-6.0 in SL, in the female 5.0-6.1 in SL. Last ray in the male 4.1-4.7 in SL, in the female 6.6-7.8 in SL. Predorsal (2) length 2.00-2.18 in SL. Anal fin beginning on a vertical through about second ray of second dorsal fin. Rays unbranched except for the last which is divided at its base. First ray 10.0-14.0 in SL. Last ray in the male 5.4-6.0 in SL, in the female 6.4-7.4 in SL. Preanal fin length 1.80-1.93 in SL. Pelvic fin reaching to first or second anal fin ray when laid back. Pelvic fin length 3.9-4.6 in SL. Prepelvic fin length 3.15-3.44 in SL. Pectoral fin distally convex, reaching to third or fourth anal fin ray when laid back. Pectoral fin length 4.4-5.2 in SL. Prepectoral fin length 2.3-2.6 in SL. Caudal fin in the male with the two median rays extremely elongate and filamentous; in the female distally convex. Caudal fin length in the male 1.1-1.8 in SL, in the female 3.3-4.0 in SL.

Colour in alcohol: Head and body yellow to brown, back with irregular dusky markings. Eye dark grey. Third membrane of first dorsal fin with an elongate black blotch, that may be heart-shaped in large specimens. Second dorsal fin translucent. Anal fin in both sexes with a distal black streak. Pectoral and pelvic fins translucent. Caudal fin translucent, its lower half may be distally dusky.

Colour in life: Head and body dorsally carmine red, with darker red markings on the back. Five carmine blotches along sides of body. Belly white. Iris greyish white, rose above. Caudal fin filaments yellow.

Sexual dimorphism: Females are smaller than males, with a paler body colour pattern and shorter filament of the first dorsal fin. Females lack caudal fin filaments. Males have a longer last ray of the second dorsal and anal fins, and a longer urogenital papilla.

Distribution: This subspecies is distributed in the tropical and subtropical West Atlantic Ocean west of about 80° W, including

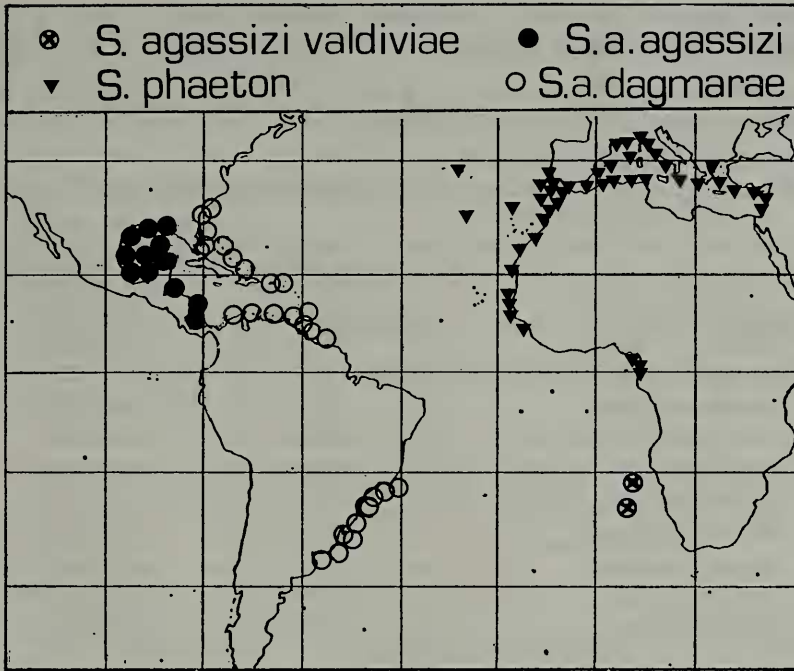


Figure 2 - Geographical distribution of *Synchiropus agassizi* (3 subspecies) and *S. phaeton*.

the Gulf of Mexico, but excluding southern and eastern Florida and the east coast of the U.S.A. (Fig. 2). The species has been found at depths of 348-622 metres, but this depth record seems to be incomplete; *S. agassizi agassizi* should also occur in shallower waters.

Remarks: The proportions of male and female specimens of this subspecies, expressed in hundredths of SL, are given in Tab. 1.

Because of constant morphological differences between western and eastern populations, showing polytypy, it had to be divided into different subspecies. This western subspecies has got the name *S. agassizi agassizi* since the type of this nominal taxon was from the Gulf of Mexico. The eastern subspecies is described under a new name in the present paper. I could not use the name «*Callionymus himantophorus*» for it, since this nominal species described by Goode & Bean (1895) referred to *S. agassizi agassizi* and was based on the same type material

as that species. The name *Callionymus valdiviae* Trunov, 1981, is not available, too; a distinct subspecies of *S. agassizi* is based on this name.

Differences between the two Western Atlantic subspecies are the different shape and spine proportions of the first dorsal fin in both

Table 1 - Proportions of *Synchiropus agassizi agassizi* (Goode & Bean, 1888), expressed as hundredths of SL.

	males	females
Predorsal (1) length	32.22-34.38	33.12-36.91
Predorsal (2) length	45.97-47.04	46.44-50.02
Preanal fin length	51.79-52.44	52.52-55.58
Prepelvic fin length	29.06-30.25	30.61-31.70
Head length	27.96-29.54	27.82-31.27
Caudal fin length	57.96-67.76	26.21-29.87
Eye diameter	11.41-12.59	12.62-15.51
First D ₁ spine length	17.66-22.21	15.89-18.46
Last D ₂ ray length	23.15-23.43	12.83-14.99
Last A ray length	17.04-17.98	13.58-15.54
Pelvic fin length	24.40-25.12	22.04-24.75

sexes, the second spine in males and first spine in females being much longer in *S. agassizi dagmarae* n. subsp., the much longer caudal fin filaments in males of *S. agassizi agassizi*, the spotted rays of the second dorsal fin in both sexes of *S. agassizi dagmarae* n. subsp., and the translucent anal fin of the male *S. agassizi dagmarae* n. subsp. In my concept of species, mostly for practical reasons, these differences are not enough to distinguish two different species.

A specimen of *Callionymus valdiviae* Trunov, 1981 was examined, and it became evident that this nominal species is conspecific with *Synchiropus agassizi* but different in the proportions of the first dorsal fin, in the elongate caudal fin without filaments, in the preopercular

spine formula of constantly $-\frac{2}{-}1$, and in the colour pattern of the

first dorsal fin that has the black blotch on its first membrane, and only dusky areas on the second and third membranes. This subspecies, occurring in the southeastern Atlantic around Valdivia Bank, is therefore treated in the present paper under the name *Synchiropus agassizi valdiviae*.

Synchiropus (Synchiropus) agassizi dagmarae new subsp.
(Fig. 3). Dagmar's Dragonet

Local name: « Beni-numeri » (Japan)

- Callionymus himantophorus* (non Goode & Bean, 1895): Breder, 1927: 83 (Isle of Pines; Glover Reef; Green Cay/Bahamas).
Parr, 1930: 129-130.
Fowler, 1944: 451 (Bahamas).
Briggs, 1957-1958: 289 (Florida).
Duarte-Bello, 1959: 114 (Cuba).
Cervigon, 1965: 56 (Venezuela).
- Callionymus agassizii*: Longley & Hildebrand, 1941: 234-235 (south of Tortuga/Florida, 80-100 fms (146-183 m)).
Fowler, 1952: 12-13 (Boynton Beach, Florida; south of Sombrero Light, Florida Keys, 80 fms (146 m)).
Duarte-Bello, 1959: 114 (Cuba).
Mirando-Ribeiro, 1961: 16 (22°55' S 43°39' W, Toko Maru/Brasil).
- Callionymus agassizi*: Briggs, 1957-1958: 243, 289 (Florida).
Davis, 1966 (part): 854-859 (Brazil, Guianas, Barbados, Virgin Islands, Puerto Rico, Florida, Georgia, South Carolina; 50-350 fms (91-640 m)).
- Collyonimus agassizi*: Gines & Cervigon, 1968: 43 (Guiana, Surinam).
- Callionymus agassizi*: Gines & Cervigon, 1968: 85 (7°35' N 54°23' W - 7°25' N 54°29' W, 136 m).
- Synchiropus agassizi*: Fricke, 1981 (part): 46-50, fig. 12 (Florida, Barbados, Brazil; South Carolina to Uruguay, 33° N to 35° S; not recorded from 5° N to 20° S).
Fricke, 1982 (part): 75.
- Synchiropus agassizii*: Matsuura, 1983: 453, fig. (Suriname).

Material (see also FRICKE, 1981:46, Florida, Barbados and Brazil material; totally: 102 specimens):

Holotype (Venezuela): USNM 188521, male, 97.7 mm SL, 09°45' N 59°45' W, R/V « Oregon », St. 1989, 4 Nov. 1957.

Paratypes (Venezuela): USNM 266454, 7 males (78.1-101.6 mm SL) and 3 females (67.3-86.0 mm SL), with the same data as the holotype.

Other material: Florida: AMNH 18696, 2 males (25.6-36.4 mm SL, Armstrong & Berry).

Suriname: NSMT 22380, 2 males (116.2-135.0 mm SL), 7°30' N 54°02' W, 220 m, 12 Jan. 1980. NSMT 22381, 1 male (126.3 mm SL), 7°27' N 53°40' W, 320 m, 14 Apr. 1981. NSMT 22382, 3 specimens (87.1-94.2 mm SL), 6°38' N 52°26' W, 475 m, 24 Jan. 1981. NSMT 22383, 1 male (114.9 mm SL) and 1 female (92.8 mm SL), 7°30' N 54°14' W, 230 m, 27 Aug. 1979. NSMT 22384, 1 male (100.0 mm SL), off Suriname. NSMT 22385, 1 female (97.4 mm SL) and 1 specimen (87.0 mm SL), 7°30' N 54°07' W, 230 m, 26 Sep. 1979. NSMT 22386, 1 male (113.1 mm SL), 6°34' N 52°26' W, 179 m, 22 Jan. 1981. NSMT

22387, 14 males (74.5-108.2 mm SL) and 12 females (72.0-107.5 mm SL), 7°32' N 54°17' W, 254 m, 26 Sep. 1979. NSMT 22391, 13 specimens (60.0-111.8 mm SL), 7°32' N 54°00' W, 250 m, trawl, 13 Jan. 1980. NSMT uncatalogized, 1 male (109.4 mm SL), 7°32' N 54°00' W, 250 m, 13 Jan. 1980. NSMT uncatalogized, 1 male (102.8 mm SL), off Suriname. NSMT uncatalogized, 1 male (106.6 mm SL), 6°38' N 52°26' W, 475 m, 24 Jan. 1981. NSMT uncatalogized, 1 female (95.2 mm SL), 6°38' N 52°26' W, 475 m, 24 Jan. 1981. SF (Sammlung Fricke, Braunschweig) P511-1983-020, 4 specimens, 7°32' N 54°17' W, 254 m, 26 Sep. 1979.

Brazil: ISH 1775/68, 1 male (138.5 mm SL), 30°11' S 48°34' W, 180 m, R/V « Walther Herwig », 27 Feb. 1968. ISH 1983/68, 3 males (112.4-132.3 mm SL), 23°24' S 42°45' W, 112 m, R/V « Walther Herwig », 10 Mar. 1968.

Uruguay: ISH 1088/66, 1 male (45.9 mm SL), 34°05' S 51°48' W, 100 m, R/V « Walther Herwig », 11 June 1956.

Diagnosis: A subspecies of *Synchiropus agassizi* with the first spine of the first dorsal fin filamentous, the second spine in the male much longer than the third and fourth spines, with the two median caudal fin rays filamentous in males (but with filament length not much exceeding the length of the rest of the fin), the rays of the second dorsal fin marked each with dark spots, and the anal fin translucent in the male.

Description: D₁ IV; D₂ 8; A vi,1; P₁ i(-ii), 16-20, ii(-iii) (totally 20-22); P₂ I,5; C (i-ii), i, 7, ii, (i).

Body elongate and depressed. Head depressed, 3.2-4.0 in SL. Body depth 7.1-8.5 in SL. Body width 5.6-6.8 in SL. Eye diameter 2.1-2.9 in head. Preorbital length 3.1-4.0 in head. Interorbital distance 17.4-36.3 in head. Occipital region with two low bony protuberances. Branchial opening sublateral in position. Preopercular spine with an upcurved main tip and one (rarely two or three) curved points on its

dorsal margin, ventral margin and base smooth (formula: $\frac{1(-3)}{\quad} 1$;

see Fig. 3B). Urogenital papilla elongate in the male, 8.5-16.1 in head; shorter or not visible in the female, more than 29.5 in head. Lateral line reaching from preorbital region to end of third or fourth branched caudal fin ray (counted from above), with a short suborbital and a long branched preoperculo-mandibular branch; the lines of the opposite

sides are interconnected by a commissure across the occipital region. Caudal peduncle length 3.7-4.3 in SL. Caudal peduncle depth 19.7-27.0 in SL.

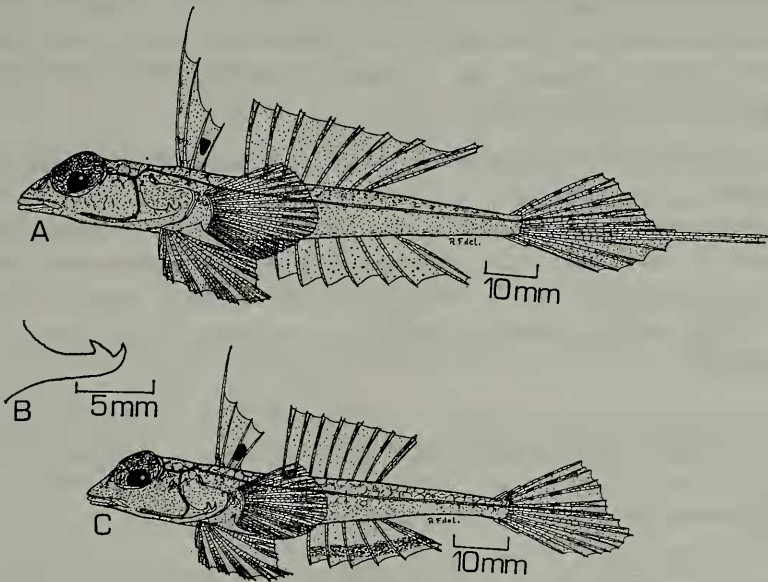


Figure 3 - *Synchiropus agassizi dagmarae* n. subsp., USNM 188521, holotype, off Venezuela, male, 97.9 mm SL: A. Lateral view. B. Left preopercular spine. USNM 266454, female, 82.2 mm SL, paratype: C. Lateral view.

First spine of first dorsal fin longest, filamentous in both sexes. Second spine in the male much higher than third spine. First spine in the male 2.6-5.8 in SL, in the female 3.0-6.3 in SL. Second spine in the male 4.4-6.5 in SL, in the female 6.1-7.3 in SL. Third spine in the male 7.0-8.9 in SL, in the female 7.2-8.2 in SL. Fourth spine in the male 9.4-11.2 in SL, in the female 9.2-11.1 in SL. Predorsal (1) length 2.85-3.27 in SL. Second dorsal fin distally straight. Rays branched, the last divided at its base. First ray 5.0-6.6 in SL. Last ray in the male 4.1-5.1 in SL, in the female 6.2-8.1 in SL. Predorsal (2) length 2.08-2.28 in SL. Anal fin beginning on a vertical through about third ray of second dorsal fin. Rays unbranched except for the last which is divided at its base. First ray 9.5-13.3 in SL. Last ray in the male 4.1-6.5 in SL, in the female 6.0-7.4 in SL. Preanal fin length 1.88-2.02 in SL. Pectoral

fin distally convex, reaching to second or third ray of anal fin when laid back. Pectoral fin length in the male 4.2-5.2 in SL, in the female 4.8-5.3 in SL. Prepectoral fin length 2.4-3.8 in SL. Pelvic fin reaching back to first or second anal fin ray base when laid back. Pelvic fin length 3.8-4.4 in SL. Prepelvic fin length 2.75-3.80 in SL. Caudal fin with two median elongate (but usually not filamentous) rays; in the female distally without elongate rays. Caudal fin length in the male 1.5-2.7 in SL, in the female 3.3-4.0 in SL.

Colour in alcohol: Head and body brown, back with irregular dusky markings. Eye dark grey. Third membrane of first dorsal fin with a small nearly round black blotch, that may be heart-shaped in males. Rays of second dorsal fin spotted with brown. Anal fin in the male pale, in the female with a distal dusky streak. Pectoral and pelvic fins translucent. Caudal fin may have dusky spots in its upper half.

Sexual dimorphism: Males have a higher first dorsal fin than females, with a relatively longer second spine, a longer last ray of the second dorsal fin, two median elongate rays in the caudal fin, a slightly larger pectoral fin, and a longer urogenital papilla.

Etymology: The new subspecies is named in honour of Dagmar Hansen, Mönchengladbach, F.R.G., to whom I am indebted for encouragement in various ways.

Table 2 - Proportions of *Synchiropus agassizi dagmarae* n. subsp. (expressed as hundredths of SL)

	Holotype (male)	other males	females
Predorsal (1) length	31.17	30.61-35.09	31.18-32.91
Predorsal (2) length	44.86	43.88-48.04	45.66-47.28
Preanal fin length	51.57	49.57-53.15	50.33-53.22
Prepelvic fin length	28.09	28.11-36.33	26.33-28.73
Head length	26.16	25.57-30.86	26.31-39.46
Caudal fin length	47.80	37.39-63.11	25.14-29.73
Eye diameter	10.42	9.58-13.00	11.05-12.86
First D ₁ spine length	32.29	18.24-37.33	15.84-32.60
Last D ₂ ray length	24.23	19.90-24.23	12.36-16.00
Last A ray length	17.80	15.37-18.77	13.61-16.45
Pelvic fin length	25.59	22.93-26.04	23.02-25.20

Distribution: This subspecies is distributed in the temperate to tropical West Atlantic, excluding the Caribbean and Gulf of Mexico areas west of about 80° W (where the western subspecies occurs); it lives between about 33° N and 35° S, but has never been recorded from 5° N to 20° S. This may be an antiequatorial distribution pattern. Geographical distribution see Fig. 2. The subspecies occurs at depths of 91-640 metres.

Remarks: The proportions of the holotype and other male and female specimens, expressed in hundredths of SL, are given in Tab. 2.

Reasons for the description of this new subspecies are discussed in the description of *S. agassizi agassizi*.

Synchiropus (Synchiropus) agassizi valdiviae (Trunov, 1981), new combination. Valdivia Dragonet

Callionymus valdiviae Trunov, 1981: 59-61, fig. 4 (Valdivia Bank, SE Atlantic Ocean, 26°13' S 06°19' E, Walvis Ridge area, 235 m, holotype ZIL 45302).

Material (totally: 1 specimen): ZIL 45303, 1 male, 144.9 mm SL, paratype, eastern South Atlantic Ocean, Walvis Ridge area, 20°49' S 08°40' E, 210-220 m, FR/V « Salekhard », 17 Mar. 1977.

Description: D₁ IV; D₂ 8; A vi,1; P₁ i-ii, 19-20, i-ii (totally: 22-23); P₂ I,5; C (i), i, 7, ii, (i).

Body elongate and depressed. Head depressed, 3.7 in SL. Body depth 6.6 in SL. Body width 5.9 in SL. Eye diameter 3.0 in head. Preorbital length 2.8 in head. Interorbital distance 11.5 in head. Occipital region with two low bony ridges or protuberances. Branchial opening sublateral in position. Preopercular spine length 5.9 in head; preopercular spine with an upcurved main tip and two curved points on its dorsal margin, with the ventral margin and base being smooth

(formula: — $\frac{2}{\text{—}}$ 1). Urogenital papilla short, 22.0 in head. Lateral line reaching from preorbital region to end of fourth branched caudal fin ray (counted from above), with a short suborbital and a branched preoperculo-mandibular branch; the lines of the opposite sides are interconnected by a commissure across the occipital region. Caudal peduncle length 4.5 in SL. Caudal peduncle depth 17.4 in SL.

First dorsal fin with a filamentous first spine in the male, second spine relatively short, not much longer than third and fourth spines. First spine 2.31 in SL. Second spine 5.8 in SL. Third spine 6.8 in SL. Fourth spine 8.2 in SL. Membrane behind fourth spine of first dorsal fin nearly absent. Predorsal (1) length 3.29 in SL. Second dorsal fin distally straight, seventh ray elongate and filamentous. Rays branched, the last divided at its base. First ray 5.4 in SL, last ray 3.8 in SL. Predorsal (2) length 2.28 in SL. Anal fin beginning on a vertical through about third ray of second dorsal fin. Rays unbranched except for the last which is divided at its base. First ray 11.3 in SL, last ray 5.2 in SL. Preanal fin length 1.95 in SL. Pectoral fin distally slightly pointed. Pectoral fin length 4.5 in SL. Prepectoral fin length 2.66 in SL. Pelvic fin distally convex, reaching back to base of first anal fin ray. Pelvic fin length 3.6 in SL. Prepelvic fin length 3.71 in SL. Caudal fin distally not filamentous, slightly asymmetrical and elongate (lower rays more elongate than upper rays). Caudal fin length 3.0 in SL.

Colour in alcohol: Head and body brown, ventrally lighter, back with irregular dark grey marblings and saddles. Head around eye with dusky spots and streaks. Eye dark grey. First dorsal fin translucent, with an elongate black blotch; second and third membranes with dusky areas. Second dorsal fin with irregular transverse dusky areas. Anal fin with a distal dusky streak. Pectoral and pelvic fins translucent. Caudal fin with irregular vertical rows of dusky spots.

Table 3 - Proportions of a paratype of *Synchiropus agassizi valdiviae* (Trunov, 1981) (expressed as hundredths of SL)

	ZIL 45303
Predorsal (1) length	30.38
Predorsal (2) length	43.89
Preanal fin length	51.18
Prepelvic fin length	26.95
Head length	26.89
Caudal fin length	33.56
Eye diameter	9.04
First D ₁ spine length	43.32
Last D ₂ ray length	26.06
Last A ray length	19.27
Pelvic fin length	28.09

Distribution: This subspecies is known only from Walvis Ridge in the southeastern Atlantic (Fig. 2). It has been collected at depths of 210-235 metres.

Remarks: The proportions of the examined paratype, expressed as hundredths of SL, are given in Tab. 3.

TRUNOV (1981: fig. 4) published an illustration of *S. agassizi validiviae*; therefore, it is not necessary to illustrate it again in the present paper.

Further remarks see description of *S. agassizi agassizi*.

REMARKS ON *Synchiropus phaeton* (Günther, 1860)

The species *Synchiropus phaeton* (see FRICKE, 1981: 39-45, figs. 9-11) is closely related to *S. agassizi*. It occurs in the Mediterranean Sea and the eastern central Atlantic (fig. 2), and has been distinguished from *S. agassizi* by FRICKE (1981), mostly by the one more ray in the anal fin.

S. phaeton seems to show an allopatric polymorphism similar to that of *S. agassizi*, with populations south of 10° N differing from northern ones in the second dorsal fin formula (8 instead of 9), and in increased variation of the preopercular spine (occasionally with 2 points on its dorsal margin). Probably, it will later be necessary to consider this species as polytypical, too, with two different subspecies, but that will need the examination of many more specimens, especially from south of 10° N.

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ABSTRACT

Synchiropus agassizi (Goode & Bean) from the western and southeastern Atlantic Ocean is considered to be polytypical, comprising three different subspecies: *S. agassizi agassizi* (Goode & Bean) from the Gulf of Mexico and western Caribbean Sea, *S. agassizi dagmarae* n. subsp. from the western Atlantic east of 80° W, and *S. agassizi valdiviae* (Trunov), originally described as *Callionymus valdiviae*, from the southeastern Atlantic.

An allopatric polymorphism of *Synchiropus phaeton* (Mediterranean, eastern Central Atlantic) is discussed.

RIASSUNTO

Synchiropus agassizi (Goode & Bean) dell'Atlantico occidentale e sudorientale è considerata specie politipica suddivisa in tre diverse sottospecie: *S. agassizi agassizi* (Goode & Bean) del Golfo del Messico e del Mar Caraibico occidentale, *S. agassizi dagmarae* nuova sottospecie dell'Atlantico occidentale a est dell'80° meridiano ovest e *S. agassizi valdiviae* Trunov dell'Atlantico sudorientale.

Anche per *Synchiropus phaeton* del Mediterraneo e Atlantico centro-orientale pare si possa ipotizzare un polimorfismo allopatrico.
